REMARKS

1. Status of claims

According to Applicants' record, claims 1-3, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115 are pending and under consideration. Claims 4, 12-14, 16, 38, 42, 67-69, 81-83, 85, 99-101, and 114 are pending but withdrawn. The Examiner indicated claim 4 was pending and under consideration. Applicants kindly request clarification.

2. Claim rejections under 35 U.S.C. §103

Pending claims 1-3, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bansleben et al., U.S. Pat. No. 6,255,248 ("Bansleben") in view of Cahill et al., U.S. Pat. No. 6,083,585 ("Cahill"). Applicants respectfully traverse this rejection.

The Examiner points to Bansleben as teaching blends of (i) oxygen scavenging polymers derived from vinyl polymerization of ethylene, cyclopentene, and optionally vinylcyclohexene (col. 3, lines 15-60), (ii) a transition metal catalyst (Abstract), and (iii) diluents, such as PET, PVC, or PVDC, among others (col. 4, lines 8-19); and to Cahill as teaching block copolymers of polyesters, such as PET, with oxygen scavenging polyolefin oligomers, such as divalent polybutadienes (col. 12, lines 17-65 and Formulas VI-VIII). The Examiner alleges that the polymers of Bansleben feature an ethylenic backbone.

The Examiner alleges that Applicants' material contains "a small fraction of other units which a skilled artisan would understand could arise as a result of 'polymerization errors' . . . [and that this could therefore] be construed as the 10-30% of [propylenic] units derived from 1,3 insertion of cyclopentene" as in Bansleben's polymer. Unlike Applicants' polymer, the polymer

of Bansleben features a non-ethylenic backbone resulting from propylenic units in the backbone of Bansleben's polymer. The amount of "other units" in Bansleben's non-ethylenic-backbone polymer is much higher than the level of "other units" in Applicant's ethylenic-backbone polymer, e.g. greater than 1%; thus, Bansleben does not disclose an ethylenic-backbone polymer.

Applicants respectfully direct the Examiner's attention to the fact that not all polymerization methods give 1,3 insertion of ring-strained cycloalkenes, i.e. cyclopentene, into a polymer backbone. For example, free radical polymerization results in substantially all 1,2-insertion providing an ethylenic backbone (e.g. greater than about 99% and typically greater than about 99.9% ethylenic insertion – or stated alternatively, less than about 1% and typically less than about 0.1% non-ethylenic insertion). This low level of non-ethylenic insertion is (i) far below the level of 1,3-insertion of cyclopentene implicit within the teachings of Bansleben and (ii) clearly a result of polymerization errors, not an inherent property of the non-ring-strained monomer and non-indenyl-zirconium catalyst as taught in Bansleben.

Additionally, Applicants submit that 1,3-insertion of ring-strained cycloalkenes, resulting in a non-ethylenic-backbone polymer, is a recognized, expected, and predictable occurrence in polymerizations of a ring-strained cycloalkene, i.e. cyclopentene, with racemic ethylenebis(indenyl)zirconium(IV)dichloride as described in Bansleben. Thus, the 10 to 30 % 1,3-insertion of cyclopentene observed in Bansleben's system does not constitute a "polymerization error", but instead represents an intended result. If the skilled artisan desired 1,2-insertion to form an ethylenic backbone, he would not have used the polymerization method of Bansleben. In other words, the polymer of Bansleben is *expected* to contain propylenic units derived from 1,3-insertion of cyclopentene as a result of the combined use of a specific and known monomer class (e.g. ring-strained cyclopentene) and catalyst (e.g. racemic

ethylenebis(indenyl)zirconium(IV)dichloride or similar catalysts). Accordingly, Bansleben's polymer does *not* have an ethylenic backbone.

In light of the foregoing discussion and Applicant's previous submissions, the combination of Bansleben and Cahill does not teach or suggest the invention of pending claims 1-3, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115, and Applicants respectfully request this rejection be withdrawn.

3. Claim rejections under 35 U.S.C. §102

Pending claims 1-3, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115 are rejected under 35 U.S.C. §102(b) as being anticipated by Matthews et al., U.S. Pat. No. 6,254,804 ("Matthews"). Applicants respectfully traverse this rejection.

The Examiner points to Matthews as teaching, in Example 12, a polymer formed from transesterification of polyethylene-co-methyl acrylate (EMAC) with 3-cyclohexene-1-methanol and combination of the polymer with cobalt oleate in *ethylene-vinyl acetate* (EVA) and a photoinitiator. The identity of "EVA" as ethylene-vinyl acetate is indicated by Matthews at col. 18, line 5.

As is well known, EVA is *not* an oxygen barrier polymer. The Modern Plastics Encyclopedia, Volume 62, Number 10A, McGraw-Hill (1986), p. 483 lists the OTR (Oxygen Transmission Rate) of EVA as 840 cc-mil/100 sq inches at 24 hours at 25°C. LDPE and HDPE, which are both considered not to be oxygen barrier polymers, have published OTRs of about 500 cc and 180 cc, respectively, while EVOH, which is considered an oxygen barrier polymer, has a published OTR of 1 cc per day. Thus, EVA's high oxygen transmission rate would preclude the skilled artisan from considering EVA an oxygen barrier polymer. Example 12 of Matthews

therefore does *not* teach a blend of an oxygen barrier polymer, an oxygen scavenging polymer, and a transition metal oxidation catalyst.

For the above reasons, Applicants respectfully request this rejection of all pending claims under consideration, pending claims 1-3, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115, as anticipated by Matthews be withdrawn.

4. Final remarks

In conclusion, Applicants respectfully submit all pending claims under consideration, namely, claims 1-3, 6-11, 15, 17-30, 32-37, 41, 43-66, 70-73, 75-80, 84, 86-91, 93-98, 102-113, and 115, are in condition for allowance. The Examiner is invited to contact the undersigned patent agent at (713) 934-4065 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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